

Collaborative Learning and the ECAI TimeMap Interface: A wish list

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The Collaborative Learning Archive Initiative (CLAI; www.indiana.edu/~clai/), which was directly inspired by the example of ECAL, is designed to facilitate the creation of archives of knowledge by communities of writers working under the editorial direction of specialists. These collaborative communities may be classrooms of students and their instructors, or groups of scholars dedicated to the study of common subjects. The TimeMap Interface is an excellent resource for the dynamic display of georeferenced data, but it could be made even more useful by software enhancements that would allow (a) training and learning exercises for students working in a controlled Interface feature set and (b) the collaborative compilation of datasets and associated explanatory material. In my remarks I will describe enhancements to the TimeMap Interface that would make it useful in these different contexts. Hopefully, the ensuing discussion will reveal other ways in which this wonderful resource might be enriched to the advantage of other students and scholars.

I. Introduction to CLAI: “there’s only learning”

A. Goal:

redesign learning environment to use students’ own energies to catalyze their own learning

an implementation of the “each one teach one” philosophy, modified to . . .

“each generation (classroom) of students contributes to the learning of their own and successive generations”

B. Basic CLAI components

in-class exercises and homework as progressive training of students for participation in an authorial community

subject learning through authorship of explanatory/analytic material: “whoever’s working is doing the learning”

course assignments as meaningful contributions designed for peers in later course iterations: cumulative development of a sharable learning archive

informational resources encoded so as to be useful to a broad spectrum of classes, grade levels, and delivery formats

C. Basic learning strategy:

information delivery through paper and web

classroom time: exercises, discussion, fielding questions,
mini-lectures: it's their learning that counts!

student work: learn by doing annotations + connections

D. Pilot implementation: a MySQL “CLAServer” at Indiana University

bodhisattva

Entry no. 1

bodhisattva

(Sanskrit)

Category: deity

Alternates: PY: pusa 菩薩, kaishi 開士; WG: p'u-sa, k'ai-shih; J: bosatsu, kaishi.

Definition: a “future Buddha,” or anyone devoted to achieving perfect enlightenment on behalf of all living beings and unsatisfied with any attainment that solely benefits him/herself; also refers to a number of prominent religious models (called “celestial bodhisattvas” for lack of a better English term) in Mahāyāna Buddhism.

Explanation: Technically, a bodhisattva is anyone who has experienced *bodhicitta*, the intention to achieve perfect enlightenment on behalf of all sentient beings. Initially the term was used to refer to the individual who would become the Buddha, both in his life as Gautama and in previous lives. Usually the term is reserved for a category of Mahāyāna sages only slightly inferior to the Buddhas; bodhisattvas are differentiated from buddhas by being more active within the world on behalf of living beings.

Information update: It is very commonly stated in English-language sources that bodhisattvas are just one step from achieving enlightenment, but hold back on behalf of other living beings. This motif occurs only rarely in the original texts, and it seems to have become emphasized through comparison with the nobility of self-abnegation in Christian theology. Actually, bodhisattvas are dedicated to achieving the same perfect and complete enlightenment experienced by the buddhas, and they are working as hard as possible to achieve that extremely lofty goal. What they want to avoid is slipping into a specific sequence of inner events that would automatically take them to a lesser (i.e., “Hīnayāna”) form of enlightenment. If the road to buddhahood is a long multi-lane highway, bodhisattvas must avoid becoming trapped in the far right lane, marked “this lane must exit,” which is a “Hīnayāna off-ramp” from which there is no return—and thus no hope of achieving buddhahood.

Explanation, continued: The term bodhisattva is composed of *bodhi*, meaning “enlightenment,” and *sattva*, “living being.” Thus, in the earliest Buddhist texts . . .

References:

Ch'en, BIC, pp. 13 and 284; Eliade, ER, 2: 265b–67b; Hastings, ERE, 2: 120a–21b; Wright, BICH, pp. 53, 75, 81, and 93.

II. TimeMap Java: Less would be more

A. Critique: current TimeMap Interface is too rich in capabilities!

ECAI has been primarily research-oriented; “more is better”

B. Goal: construct series of exercises (interactive demonstrations) accommodating progressive scales of grade level (elementary, middle, high school, college, graduate) language (English, Chinese/Japanese, diacritical marks) term (weeks throughout semester or quarter)

C. Focus: development of TMJava layout capabilities

Ian Johnson, et al., *TimeMap TMJava User Manual*, Chapter 5: “Customising Map Layouts”: default_layout.xml can be edited to eliminate/select features

Must be able to edit layout according to:

1. Initial instructor-determined settings
2. Options for student selection (within instructor-determined range)
3. Change of layout based on XMI/XSLT events

D. An exemplary exercise series

1. Begin exercise sequence with no user-selectable features, predetermined map display, capabilities based on user profile as established by instructor, and text display and input areas at bottom of screen.

Example: Map of Asia, with student instructed to click mouse on birthplace of Buddhism. Selecting Tibet, for example, would elicit informative error message—“Sorry, but Buddhism only arrived in Tibet in the 7th c. CE, comparatively late in Buddhist history.” Correct answer (Gangetic Plain area of what is now northern India) would result in display of additional information, either/both in new map layers or as text.

2. In subsequent step, or based automatically on successful student response, display changes to reveal new map layers.

Example: After student successfully selects the birthplace of Buddhism, a series of arrows appear, pointing in the four directions. Student is required to choose direction Buddhism traveled first in eventually reaching China. (Answer: to the west!)

3. Based on successful student response, display changes to show existence of different map layers and so as to allow student to select them. Student is asked to try out different layers and gauge their significance to a specific study question.

Example: Student is shown different map view, focusing on Mathurā, Gāndhāra, and adjacent areas from northwest India to Central Asia. Layers available include contemporary political boundaries (Kushan and Saka states, Alexander’s conquest, and Aśoka’s empire), ethnic/linguistic concentrations, river systems, mountain ranges, and trade routes. Student is asked various questions about how different factors influenced how Buddhism was disseminated through the area.

4. Following this, display changes to show limited set of sites, with mouseover instructions and links to information about them; student is asked to search other course resources or reference materials in contributing information.

Example: Display reveals “Silk Road” routes throughout Asia, initially with only most major cities and sites indicated. Student is assigned a site according to user id, and required to add information from one of the different sources assigned to be used in the course. For high school and undergraduate students, this might be Sally Hovey Wriggins, *Xuanzang: A Buddhist Pilgrim on the Silk Road* (Boulder, Colo.: Westview Press, 1996); for graduate students it might be Ji Xianlin 季羨林, et al., *Da Tang Xiyu jiaozhu* 《大唐西域記》校注 (Beijing: Zhonghua shuju 中華書局, 1985). Information will be added to “CLAServer” as draft contribution, to go through pre-established editorial process.

III. Conclusions

A. Recommendations primarily involve XML/XSLT techniques for predetermined and on-the-fly modifications of the default_layout.xml file

B. Coordinated use of MySQL “CLAIserver” and ECAI TimeMap Interface should establish patterns of usage that could be replicated in other learning situations

C. Without need for any change in current ECAI software or resources, more means less

Presentation site: <http://www.indiana.edu/~clai/>